Amendments to the Claims:

A clean version of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121(c) (3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A power control system including:

a demodulator that demodulates~~for demodulating~~ a ~~first signal~~power control bit (PCB) having a power value, the demodulated ~~first signal~~PCB including a noise component that is perpendicular to a signal axis of the ~~first signal~~PCB;

a first circuit coupled to the demodulator for receiving the demodulated ~~first signal~~PCB, the first circuit determining a noise variance of the demodulated ~~first signal~~PCB from the perpendicular noise component;

a second circuit coupled to the demodulator and the first circuit, the second circuit providing an estimate of the power value of the ~~first signal~~PCB by eliminating the noise variance of the perpendicular noise component from the demodulated ~~first signal~~PCB; and

an estimator coupled to the first circuit and the second circuit, the estimator calculating the ratio of the power value estimate and the noise variance.

2. (Original) The system of claim 1 wherein the estimator compares the ratio to a threshold value to provide one of a power up and power down signal to a base station.

3. (Currently Amended) The system of claim 1 wherein the ~~first signal~~ PCB is a BPSK modulated signal.

4. (Cancelled).

5. (Cancelled).

6. (Currently Amended) The system of claim 1 wherein the ~~first signal~~ PCB is a PAM signal.

7. (Cancelled).

8. (Cancelled).

9. (Currently Amended) The system of claim 1 wherein the first circuit samples a single demodulated ~~first signal~~ PCB to provide an instantaneous noise variance value.

10. (Currently Amended) The system of claim 1 wherein the first circuit samples a plurality of demodulated ~~first signals~~ PCBs to provide an average noise variance value.

11. (Currently Amended) The system of claim 10 wherein the plurality of demodulated ~~first signals~~ are PCBs are within a PCG.

12. (Currently Amended) The system of claim 1 wherein the second circuit provides an instantaneous estimate of the power value of the ~~first signal~~ PCB.

13. (Currently Amended) The system of claim 1 wherein the second circuit computes a power value for a plurality of ~~first signals~~ PCB to provide an average power value estimate.

14. (Original) The system of claim 1 wherein the second circuit employs a histogram-

based approach to determine whether the average power value estimate is above or below a predetermined threshold.

15. (Currently Amended) A power control system for making inner loop forward control power decisions and generating a corresponding power control signal for transmission to a base station, including:

a demodulator that demodulates~~for demodulating~~ a ~~first signal~~ power control bit (PCB) from the base station, the ~~first signal~~PCB having a power value, the demodulated ~~first signal~~ (PCB) including a noise component that is perpendicular to a signal axis of the ~~first signal~~PCB;

a noise variance calculation circuit coupled to the demodulator for receiving the demodulated ~~first signal~~PCB, the noise variance calculation circuit sampling the perpendicular noise component to determine a noise variance of the demodulated ~~first signal~~PCB ;

a power estimation circuit coupled to the demodulator and the noise variance calculation circuit, the power estimation circuit providing an estimate of the power value of the ~~first signal~~PCB by eliminating the noise variance of the perpendicular noise component from the demodulated ~~first signal~~PCB; and

an estimator coupled to the noise variance calculation circuit and the power estimation circuit, the estimator calculating the ratio of the power value estimate and the noise variance; and

a comparator for comparing the ratio to a threshold value to provide one of a power up and power down signal to the base station.

16. (Currently Amended) The system of claim 15 wherein the ~~first signal~~PCB is a BPSK modulated signal.

17. (Cancelled).

18. (Cancelled).

19. (Currently Amended) The system of claim 15 wherein the ~~first signal~~ PCB is a PAM signal.

20. (Cancelled).

21. (Cancelled).

22. (Currently Amended) The system of claim 15 wherein the noise variance calculation circuit samples a single demodulated ~~first signal~~PCB to provide an instantaneous noise variance value.

23. (Currently Amended) The system of claim 15 wherein the noise variance calculation circuit samples a plurality of demodulated ~~first signal~~PCBs to provide an average noise variance value.

24. (Currently Amended) The system of claim 23 wherein the plurality of demodulated PCBs are within a PCG.

25. (Currently Amended) The system of claim 15 wherein the power estimation circuit provides an instantaneous estimate of the power value of the ~~first signal~~PCB.

26. (Currently Amended) The system of claim 15 wherein the power estimation circuit computes a power value for a plurality of ~~first signals~~PCBs to provide an average power value estimate.

27. (Original) The system of claim 15 wherein the power estimation circuit employs a histogram-based approach to determine whether the average power value estimate is

above or below a predetermined threshold.

28. (Currently Amended) A method for making control power decisions including the steps of:

demodulating a ~~first signal~~PCB from a base station;

sampling a noise component of the demodulated ~~first signal~~PCB which is perpendicular to the fade line to determine the Nt associated with the demodulated ~~first signal~~PCB;

estimating the E_b associated with the ~~first signal~~PCB by eliminating the variance of the sampled perpendicular noise component from the square of the demodulated ~~first signal~~PCB;

computing an estimated E_b/N_t;

comparing the estimated E_b/N_t to a threshold value; and

providing one of a power up and power down signal to the base station depending upon whether E_b/N_t is greater than or less than the threshold value.

29. (Currently Amended) The method of claim 28 wherein the ~~first signal~~PCB is a BPSK modulated ~~PCB~~signal.

30. (Currently Amended) The method of claim 28 wherein the ~~first signal~~PCB is a data bit.

31. (Currently Amended) The method of claim 28 wherein the noise component of a single demodulated ~~first signal~~PCB is sampled to provide an instantaneous estimate of the variance of the sampled noise component.

32. (Currently Amended) The method of claim 28 wherein the device samples a plurality of demodulated ~~first signals~~PCBs to provide an average of a plurality of estimates of the variance of the sampled noise component.

33. (Currently Amended) The method of claim 32 wherein the plurality of demodulated PCBs are within a PCG.

34. (Currently Amended) The method of claim 28 wherein E_b is estimated for a plurality of ~~first signals~~PCBs to provide an average estimate of E_b.